DESCRIPTIONS OF THE GENERA *BATHANALIA* AND *BYTHOCERAS*, FROM LAKE TANGANYIKA.

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Among the molluses which I obtained in Lake Tanganyika there are two highly interesting gastropods, which are sufficiently distinct from all known forms to be worthy of at least generic rank. Such rank has been accorded to them in a paper read before the Royal Society,[1] in which these two forms were figured and briefly described under the names *Bathanalia Howesi* and *Bythoceras iridescens*. In two further papers,[2] additional questions concerning the distribution of these molluses were considered, and the anatomy of *Bathanalia*, with a short diagnosis, was given. Since, however, in these three papers they were treated rather from a faunistic and an anatomical standpoint, than from that of the systematist, it has been deemed advisable to publish diagnoses of these genera in this journal, where they will be more accessible for the conchologist.

Both forms live only at very great depths, and were obtained from the southern half of the lake; they are essentially members of what I have termed the halolimnic[3] fauna of Lake Tanganyika.

1. Bathanalia Howesi, Moore. Fig. II.

Bathanalia Howesi, Moore: Proc. Roy. Soc., vol. lxii (March, 1898), p. 452, fig. 2; Quart. Journ. Micro. Sci., vol. xli (March, 1898), p. 192, pl. xii, figs. 29–31 and 33.

Shell conical, turreted; colour transparent white, with a faint trace of brownish periostracum upon the liræ; whorls 8, apical whorls missing, angular or carinated, the angulations being more acute in the upper whorls, while in the last whorl the shell becomes slightly convex both above and below the carina, carina from apex to mouth of shell bearing numerous short spinous processes, whorls strongly sculptured with numerous longitudinal spiral nodulous liræ, from 5–6 above and 8–10 stronger ones below the carina; mouth rotund-pyriform, last spine forming as a notch in the outer lip; columella open; operculum littorinoid.

Except in the possession of a more open columella, the genus *Bathanalia* is conchologically indistinguishable from the Jurassic genus *Amberlya*.

Anatomically *Bathanalia* closely resembles the genus *Typhobia*, but differs from it somewhat in its radula[4] and greatly in its shell; unlike the latter genus, the shells of *Bathanalia* are singularly devoid of variation.

Bathanalia was dredged living at a depth of 800 feet and upwards, near Mleroes, Lake Tanganyika.

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[1] Proc. Roy. Soc. Lond., vol. lxii (1898), p. 452.
[2] Quart. Journ. Micro. Sci., vol. xli (1898), pp. 159–202 and 303–320.
[3] ἅλς, 'salt,' and λίμνη, 'lake.' [4] Quart. Journ. Micro. Sci., loc. cit., p. 189.

2. Bythoceras iridescens, Moore. Fig. I.

Bythoceras iridescens, Moore: Proc. Roy. Soc., vol. lxii (March, 1898), p. 452, fig. 1.

Shell ovato-fusiform, semi-solid; colour ochraceous-brown, last whorl darker; whorls 11½, apical whorls smooth, second whorl with spiral liræ, no ribs, protoconch heterostroph, whorls strongly sculptured, bearing 15–17 nodulous spiral liræ, the 6–7 upper liræ being especially nodulous, nodulations of different liræ coinciding and forming transverse rounded ribs, the ribs in the younger whorls and in the upper part of the last whorl being very pronounced and obscuring the spiral liræ; sutures channelled; mouth in adult oval with continuous thickened whitish-iridescent lip, produced both anteriorly and posteriorly into a solid spine, the posterior spine is

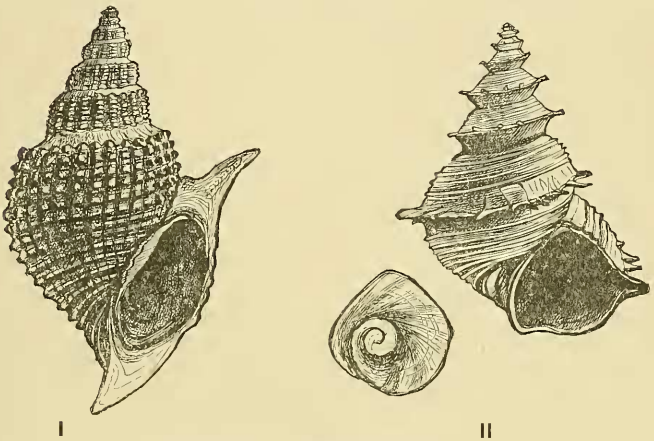

Fig. I.—*Bythoceras iridescens*, Moore.
,, II.—*Bathanalia Howesi*, Moore, with operculum.

especially strongly developed and may curve outwards, is triangular in section but slightly excavated on its lower surface, the anterior spine is less developed. In old specimens the oval lip is continued, and projects slightly beyond the plane of the spines, in young specimens both the spines and the thickened lip are wanting, and the mouth is then somewhat larger, thin-edged, and elliptical. The brownish periostracum is very thin, like that of *Nassopsis* and *Paramelania*; operculum as in *Paramelania* and *Typhobia*. It is, however, most remarkable that this form bears no anatomical resemblance to *Nassopsis*, being much more like *Tanganyicia rufofilosa*. The specific name was chosen from the peculiar yellowish pearly layer lining the mouth and interior of the shell.

Bythoceras was dredged living in 600–700 feet, near Sumbu, Lake Tanganyika.